



Job Name: \_\_\_\_\_ Job Site Location: \_\_\_\_\_

Date: \_\_\_\_\_ Start Time: \_\_\_\_\_ Finish Time: \_\_\_\_\_ Foreman/Supervisor: \_\_\_\_\_

**Topic 322: Arc Flash Hazards – Protective Equipment (Part C)**

**Introduction:** The following tables are for reference use with meetings 320 (Part A) & 321 (Part B), and are in accordance with OSHA §1910.137 (Subpart I) “The employer shall certify that equipment has been tested in accordance with the requirements of this section. The certification shall identify the equipment that passed the test and the date it was tested”.

**Note:** Marking of equipment and entering the results of the tests and the dates of testing onto logs are two acceptable means of meeting this requirement.

**Table 1-2 – A-C Proof-Test Requirements**

| Class of Equipment | Proof-test Voltage, rms V | Maximum proof-test current, mA (gloves only) |                     |                     |                     |
|--------------------|---------------------------|--|---------------------|---------------------|---------------------|
|                    |                           | 267mm (10.5 in) glove                        | 356mm (14 in) glove | 405mm (16 in) glove | 457mm (18 in) glove |
| 0.....             | 5,000.....                | 8.....                                       | 12.....             | 14.....             | 16.....             |
| 1.....             | 10,000.....               | .....  | 14.....             | 16.....             | 18.....             |
| 2.....             | 20,000.....               | .....  | 16.....             | 18.....             | 20.....             |
| 3.....             | 30,000.....               | .....  | 18.....             | 20.....             | 22.....             |
| 4.....             | 40,000.....               | .....  | .....               | 22.....             | 24.....             |

**Table 1-3 - D-C Proof-Test Requirements**

| Class of Equipment | Proof-test voltage |
|--------------------|--------------------|
| 0.....             | 20,000             |
| 1.....             | 40,000             |
| 2.....             | 50,000             |
| 3.....             | 60,000             |
| 4.....             | 70,000             |

NOTE: The d-c voltages in this table are not for proof-testing rubber insulating line hose or covers. For this equipment, d-c proof-tests shall use a voltage high enough to indicate that the equipment can be safely at the voltages listed in Table 1-4

**Table 1-4 – Glove Tests – Water Level**

| Class of Glove | A-C Proof test |           | D-C Proof test |           |
|----------------|----------------|-----------|----------------|-----------|
|                | mm.            | in.       | mm.            | in.       |
| 0 .....        | 38 .....       | 1.5 ..... | 38 .....       | 1.5 ..... |
| 1 .....        | 38 .....       | 1.5 ..... | 51 .....       | 2.0 ..... |
| 2 .....        | 64 .....       | 2.5 ..... | 76 .....       | 3.0 ..... |
| 3 .....        | 89 .....       | 3.5 ..... | 102 .....      | 4.0 ..... |
| 4 .....        | 127 .....      | 5.0 ..... | 153 .....      | 6.0 ..... |

**Table 1-5 – Rubber Insulating Equipment Voltage Requirements**

| Class of equipment | Maximum use voltage | Retest voltage | Retest voltage |
|--------------------|---------------------|----------------|----------------|
|                    | a-c – rms           | a-c – rms      | d-c – avg      |
| 0.....             | 1,000.....          | 5,000.....     | 20,000.....    |
| 1.....             | 7,500.....          | 10,000.....    | 40,000.....    |
| 2.....             | 17,000.....         | 20,000.....    | 50,000.....    |
| 3.....             | 26,000.....         | 30,000.....    | 60,000.....    |
| 4.....             | 36,000.....         | 40,000.....    | 70,000.....    |

- The water level is given as the clearance from the cuff of the glove to the water line, with a tolerance of ± 13mm
- If atmospheric conditions make the specified clearances impractical, the clearances may be increased by a minimum of 25mm (1 inch)

The maximum use voltage is the a-c voltage(rms) classification of the protective equipment that designates the maximum nominal design voltage of the energized system that may be safely worked. The nominal design is equal to the phase-to-phase voltage on multiphase circuits. However, the phase-to-ground potential is considered to be the nominal design voltage.

**Table 1-6 – Rubber Insulating Equipment Test intervals**

|                               |  |
|-------------------------------|--|
| Rubber insulating line hose / | Upon indication that insulating value is suspect |
| Rubber insulating covers /    | Upon indication that insulating value is suspect |
| Rubber insulating blankets /  | Before first issue and every twelve months       |
| Rubber insulating glove /     | Before first issue and every six months          |
| Rubber insulating sleeves /   | Before first issue and every twelve months       |

If the insulating equipment has been electrically tested but not issued for service, it may not be placed into service unless it has been electrically tested within the previous 12 months.

- If there is no multiphase exposure in a system area and if the voltage exposure is limited to the phase-to-ground potential, or
- If the electrical equipment and devices are insulated or isolated or both so the multi-phase exposure on a grounded wye circuit is removed. The proof-test voltage shall be applied continuously for at least 1 minute, but no more than 3 minutes

**Note:** Standard electrical test methods meeting this requirement are given in the following national consensus standards: American Society for Testing and Materials  
 ASTM D 120-87, Specification for Rubber Insulating Gloves      ASTM D 1051-87, Specification for Rubber Insulating Sleeves.  
 ASTM D 1048-93, Specification for Rubber Insulating Blankets.      ASTM F 478-92, Specification for In-Service Care of Insulating Line Hose and Covers.  
 ASTM D 1049-93, Specification for Rubber Insulating Covers.      ASTM F 479-93, Specification for In-Service Care of Insulating Blankets.  
 ASTM D 1050-90, Specification for Rubber Insulating Line Hose      ASTM F 496-93b, Specification for In-Service Care of Insulating Gloves and Sleeves.

**Conclusion:** This meeting is to be used as reference tables for meetings **320 (Part A) & 321 (Part B)**.

**Work Site Review**

Work-Site Hazards and Safety Suggestions: \_\_\_\_\_

Personnel Safety Violations: \_\_\_\_\_

**Employee Signatures:** \_\_\_\_\_  
 (My signature attests and verifies my understanding of and agreement to comply with, all company safety policies and regulations, and that I have not suffered, experienced, or sustained any recent job-related injury or illness.)

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These guidelines do not supercede local, state, or federal regulations and must not be construed as a substitute for, or legal interpretation of, any OSHA regulations.